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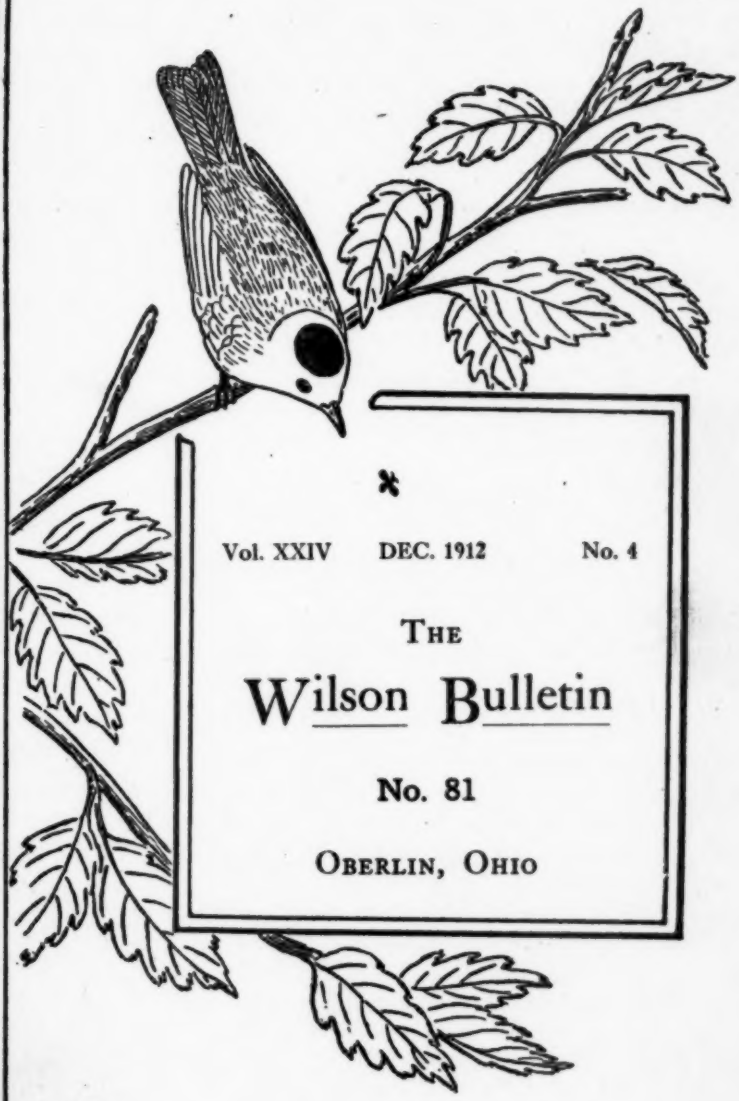

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The Wilson Bulletin

No. 81

Oberlin, Ohio

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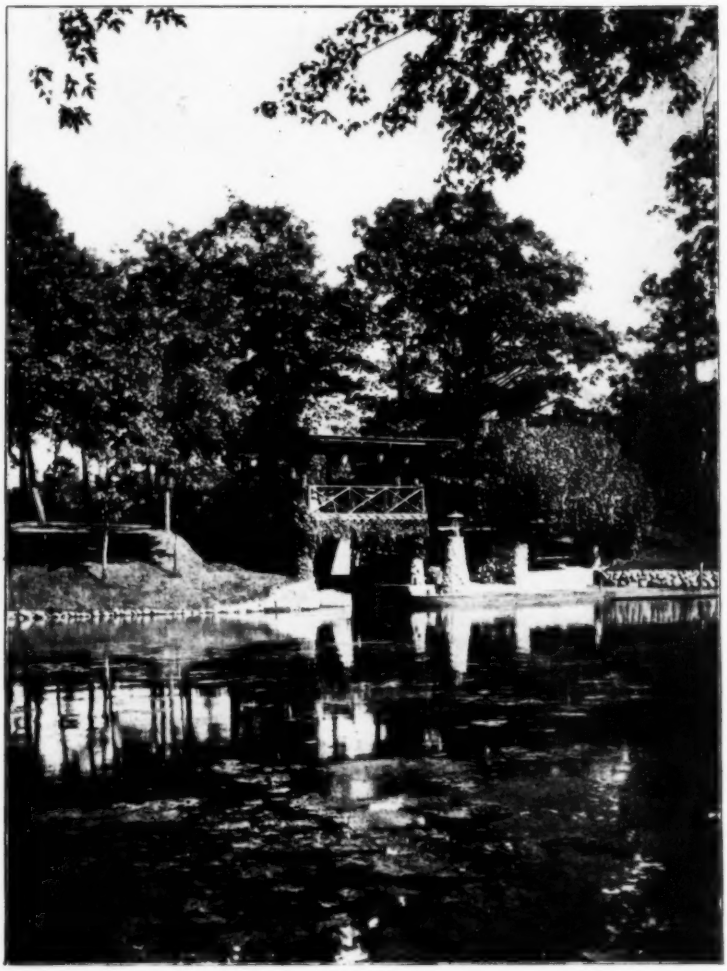

The pavilion where the Prothonotary Warbler's nest was found. Riverside, Ill. (Photo by Benj. T. Gault.)

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PROTHONOTARY WARBLERS (PROTONOTARIA CITREA) NESTING AT RIVERSIDE, ILLINOIS.

BY ORPHEUS M. SCHANTZ.

It is a rare pleasure at any time to make a new bird acquaintance, but to find that a supposed occasional spring migration visitor is an "old settler," and that it had nested in your vicinity as far back as 1898, although none of the local published records mentioned it except as a migrant, added greatly to the interest in finding a nest of this beautiful warbler in 1911 at Riverside.

On the morning of July 2nd, the writer and a friend, by the fortunate accident of a leaking canoe, were obliged to land at the home of an acquaintance on the east bank of the Des Plaines river at Riverside.

After getting the necessary "first aid," we were shown around the beautiful grounds with its fine native trees and artistic river frontage. As a final attraction we were invited to inspect a pavilion, the lower story of which served as a boat-house, and to see an unusually located bird's nest.

The pavilion was hung with Chinese lanterns each containing an electric light bulb. In the only lantern having a defective bulb a pair of small birds had built a nest.

The nesting place was so unusual that the owner of the place, although not greatly interested in birds and knowing scarcely any by name, had become very much interested in his tenants.

After the nest was discovered the pavilion was used as before and the birds seemingly were not at all disturbed by the coming and going of visitors.

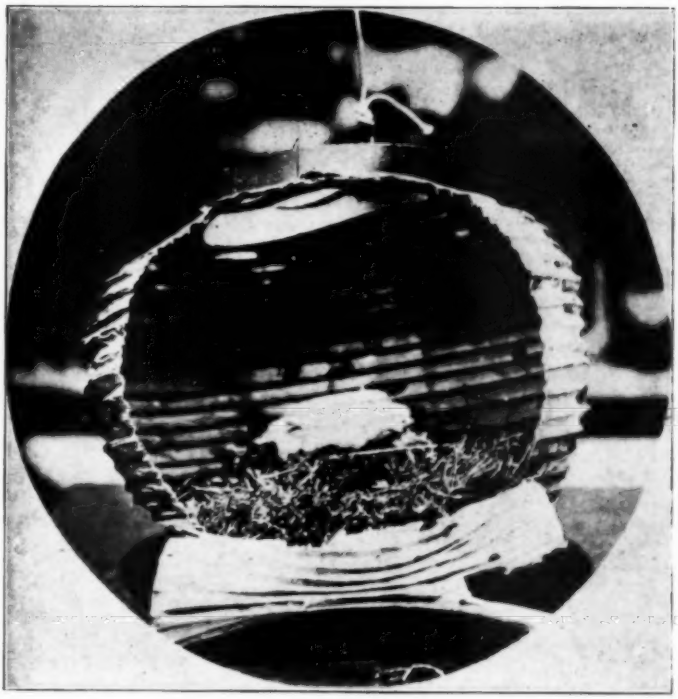
By standing on a camp chair it was easily possible to look down into the nest and see the little mother on the eggs without disturbing her. Not wishing to frighten the birds a very hurried view was taken, and the writer supposed he had seen only an unusually placed nest of the common Yellow Warbler. You can perhaps imagine his surprise and delight a few minutes later, to see on a nearby tree a pair of Prothonotary Warblers. A second examination of the nest was made to be positive as to the identification. This revealed five beautifuly marked eggs, and a nest entirely different from that of the Yellow Warbler, and typical of the Prothonotary.

The mother bird soon returned to the nest, perching on the edge of the lantern before entering, and the ringing song of the male was then heard from a large willow tree across the river.

Within about a week the five eggs were replaced by five very hungry little warblers, and both parents were kept exceedingly busy carrying worms to their family. For some undiscovered reason all the young birds died before the 16th of July. Whether the public location of the nest finally disturbed the old birds so that they did not feed the little ones enough, it is impossible to say.

The location of the nest was not only remarkable for being in the lantern, but for the fact that only a few hundred feet away was the "Q" railroad bridge with its noisy traffic day and night.

Shortly after the discovery of the identity of the occupants of the nest, it was the writer's privilege to meet the lady who made the first record of the Prothonotary Warbler nesting at Riverside, Mrs. P. K. Solger.



The Prothonotary Warbler's nest in a chinese lantern. Riverside, Ill. (Photo by O. M. Schantz.)

Mrs. Solger's notes accurately described it in 1897, and told of its nesting and rearing a brood in 1898. By an oversight her observations were not included in the bird bulletin published by the Chicago Academy of Sciences a few years ago.[1]

That the birds have nested along the Des Plaines year after year is quite probable, for the conditions are ideal, both as to nesting sites and food supply.

The discovery of the Riverside nest positively establishes the fact of the Prothonotary breeding much farther north in Illinois than previously reported, and sets a new nesting record for Cook County.

The nest and its occupants were visited by a number of bird lovers before its desertion, some of them coming purposely from quite a long distance. Several attempts were made to photograph the parent birds while perching on the edge of the lantern, but no good negatives were produced on account of poor light.

Mr. Ben. T. Gault of Glenn Ellyn, Ill., photographed the pavilion from across the river, and the accompanying picture shows the remarkable nesting site.

[1] The Birds of the Chicago Area, 1907.

FOOD OF HERONS AND IBISES.

BY OSCAR E. BAYNARD.

During the past three years that I have been Warden of the Orange Lake Florida Reservation of the National Association of Audubon Societies I made a special effort to learn the exact kind of food that the Herons and Ibis prefer.

From the following list it will be seen that these birds do a lot more good to the country than any one has given them credit for. The Ibis for their fondness for Crayfish have about cleaned up the thousands of acres of flooded marshes around Orange Lake and the other known fact that Crayfish destroy thousands of the spawn of fish and I have noticed that lakes and ponds that have marshes around them and no

Ibis are nearly always devoid of any great number of fish. However, lack of fish is not always due to lack of Ibis as we have a class of men in Florida who trap lakes and catch any fish that they can sell, and this means almost anything from three inches and up in length. However, lakes that have not been bothered with this class of fishermen and also have not had the Ibis there are poorly stocked with fish.

Orange Lake has been fished with traps continually but with the thousands of Ibis and Herons that use the lake as a reservation have kept the crayfish down to such an extent that there are more fish today in Orange Lake than in many years. There are several thousand acres of marsh around this lake and this has given the fish plenty of places to spawn. As young fish eat millions of mosquitos it stands to reason that with Ibis and Herons we have more fish and less mosquitos, and any bird that does so much good to a State is of very great value and should be protected for that reason alone.

This past Summer we had six days of continuous rain and I noted in one field of about three acres on the edge of the lake that had been planted in squash over two thousand Ibis walking around, turning over the squashes and catching grasshoppers, and from the eagerness with which they hunted they were having good luck. Grasshoppers do mil lions of dollars damage to the crops of the Florida farmers, and any bird that does this great good is the farmer's best friend.

One Glossy Ibis male that I dissected contained: 14 cut-worms, 12 grasshoppers, 19 small crayfish, part of small moccasin, 1 black bug of some description.

Adult Little Blue Heron had in its stomach: 51 grass-hoppers, 2 small frogs, 3 cut-worms, 1 small lizard, remains of three crayfish.

Adult Green Heron had in its stomach: 6 small crayfish, 16 grasshoppers, 2 cut-worms, remains of small frogs.

Adult Lousiana Heron had it it's stomach nothing but grasshoppers too far digested to determine the number but evidently about 200.

North-west end of the roost showing the woods on the north of the roost, and two of the trees where the first arrivals alight. Northfield, Ohio.
(Photo by A. J. Stover.)

Food of 50 young Egrets that was disgorged by them at the nests immediately after being fed, running over a period of four weeks. The total of the 50 meals follows: 297 small frogs, 49 small snakes, mostly the Water Moccasin, 61 young fish, suckers, not edible, 176 crayfish.

Food of fifty meals of young White Ibis: 352 cut-worms, 308 grasshoppers, 602 crayfish, 42 small moccasins.

Food of fifty meals of Young, Little Blue Herons: 1900 grasshoppers, 37 small frogs, 149 cut-worms, 8 lizards, 142 small crayfish.

Food of fifty meals of young Louisiana Herons: 2876 grasshoppers, 8 small frogs, 17 cut-worms, 6 lizards, 67 small crayfish.

Food of fifty meals of young Snowy Egrets: 120 small suckers, 762 grasshoppers, 91 cut-worms, 2 small lizards, 29 small crayfish, 7 small moccasins.

Food of fifty meals of young Water Turkeys. All contained fish, mostly the suckers, pickerel and a few small catfish, none of which are much used for food fish.

Food of fifty young Night Herons: 60 crayfish, 610 small catfish, 31 small pickerel, 79 dragon flies.

A ROBIN'S ROOST.

BY A. J. STOVER.

At Northfield, Ohio, east of the car line is a strip of woods and swamp, in this is a 5 acre piece of land which had once been cleared then neglected, and is now covered with a dense growth of dog-wood, oak, sassafras, wild cherry, chestnut, shumach, etc., about 15 to 20 feet in height. This is protected on the north and east by woods and on the south by a tamarack swamp, the west is open. This low protected place is where the robins roost.

Scattered about this region are numerous bog holes, covered with huckle, alder, and elder berry bushes which afford an abundance of food during late summer and autumn.

Soon after the nesting season small groups of robins may

be found in the roost at night, this year I found them as early as the 14th of June, last year they were somewhat later. The first are apparently family groups and have little to do with each other, each group acting independently of the rest. From now on the flock increases rapidly and by the middle of July several hundred spend the night at the roost, separating during the day, later when the berries ripen they gather in flocks at the feeding ground flying to and from the roost in a body. It is at this time that the flock increases most rapidly usually reaching its height about the middle of August, although this year it did not do so until the middle of September, possibly, because the drought killed most of the berries.

The robins begin coming in about half an hour before sunset, the first arrivals alighting in a number of dead trees about the edge of the roost where they await the others or until it becomes darker when they join an incoming flock and fly to the roost. The old birds are the first to arrive and are cautious, the young come later and take their places heedlessly, frequently alighting within a foot of a person standing in the roosting ground.

As the sun sinks large flocks fly in, I have seen as many as 145 in the air at one time.

August 27, 1909. (5:40 p. m.) 16—4—8—1—4—4—8—(5:45) 1—1—5—18—9—145——124—(5:52) 35—40—8—35—10—37—4—20—40—42—10—30—4— (6:00) 42—8—5—5—1—3—6—(6:05)—11—4—1—1—4—1—17—1—(6:40) 4. Total, 770 from the west.

Sept 20, 1910. (4:48) 8—(4:50) 4—4—(5:04) 5—5—22—21—11—1—2—8—17—1—1—6—(5:15) 11—3—2—1—4—4—23—35—50—31—4—25—14—21—7—4—25—7—3— 32—(5:25) 24—30—22—33—1—(5:30) 16—2—2—23—7—2—4—2—1—(5:35) 3—6—5—1—1. Total 607 from the north, 100 from the west, many from the east and south, there are probably over 1000 robins roosting there this year.

I have noticed that they come in earlier on cloudy days than on clear days.

Interior of the Robin roosting place. Northfield, Ohio.
(Photo by A. J. Stover.)

When all are at the roost there is a confused clatter of calls, alarm notes, and scraps of song, finally they quiet down, often during the night they become frightened and fly about the roost calling to one another. Careful as they are many are killed at night especially during the autumn.

During the autumn the robins roam about the country from one feeding ground to another, taking in turn wild cherries, pokeberries,dogwood berries, and wild grapes. The singing of the birds of the year, begun early in September, now reaches its height, the robins may be seen chasing one another through the woods calling loudly, now and then hundreds burst into song, or frightened groups fly through the woods as a hawk flies over. For a time at noon all is quiet, then they begin as before and as sun set approaches fly to roost.

The roost is occupied until the leaves fall, when the robins all leave at once. Last year this occurred on the 13th of October.

A STUDY OF THE AVI-FAUNA OF THE LAKE ERIE ISLANDS.

BY LYNDS JONES.

THE BIRDS OF PELEE ISLAND, ONTARIO, CANADA.

Tyrannus tyrannus.—Kingbird.

Common on all visits to the island, and migrating in small companies during the most of August and into September. There were no indications of such extensive nestings on the island as the numbers found there would indicate to be the case.

Myiarchus crinitus.—Crested Flycatcher.

None were found except in 1910, when there was one at the Fishing Point swamp nearly every day after August 5, when the first was seen. There were three there on August 11, two on the 22d, 29th and 31st, and eight on September 5. Conditions seemed to be favorable for several nesting pairs, but none such were found.

Sayornis phœbe.—Phœbe.

Found in 1910 only. The first was found at the Fishing Point swamp on July 19, and one or two there in the vicinity of an old ice house every time the locality was visited. The building was kept locked, so there was no opportunity to explore its interior for the probable nest.

Nuttallornis borealis.—Olive-sided Flycatcher.

One on August 23, 24, 25, 31, and September 5; three on September 1, and two on September 3, 1910. Two were found on August 18 and 19, 1908. The favorite place for this bird seemed to be a certain dead topped tree which stood on the north edge of the deciduous woods which bordered what we termed "The Sumack Park," south of the Fishing Point swamp. The birds were usually first seen on this tree, but left it for some other perch when we approached too near.

Myiochanes virens.—Wood Pewee.

Common everywhere on all visits to the island, and singing. None were seen in the act of migration.

Empidonax flaviventris.—Yellow-bellied Flycatcher.

In 1910 only. The first, two on August 19, and thereafter some were seen every day to the end of our stay. They were most numerous during the first week in September, when a marked migration seemed to be in progress. They kept well down in the trees and bushes, and were silent most of the time. On warm days following chilly nights a few individuals were heard to sing.

Empidonax virescens.—Acadian Flycatcher.

Since this is not an accredited Ontario bird, except for the specimen which J. H. Fleming believes he took at Ontario, but lost by the taxidermist, the complete record seems warranted. None were found except in 1910, when the following records were made, all for the woods on the Fishing Point, mostly near the swamp. One on August 15 and 18; two on the 19th, 20th, 21st and 23d; three on the 22d; one on the 29th, 30th and 31st; six on September 1; four on the 2d; two on the 3d and 5th, and one on the 6th. The first noted were singing, and occasional songs were heard afterward. Specimens were taken.

Empidonax trailli alnorum.—Alder Flycatcher.

The A. O. U. Check-List notwithstanding, this is the form which inhabits Ohio and Pelee Island. Specimens from central and north-Ohio have been submitted to Mr. H. C. Oberholser, and all pronounced *alnorum*. It was present at the Fishing Point swamp during the most of our stay on the island in 1910, two or three being

noted on each visit. No migratory movement was noted. Besides the peculiar call note a bird occasionally sang. Nests built after the manner of this bird were found, but it was not possible to positively identify them as such.

Empidonax minimus.—Least Flycatcher.

Present on all visits, and common after August 5, 1910. During the most marked migratory movements this little flycatcher swarmed over the beaches where the vegetation was scanty as well as among the brush and trees. Of course it was singing. Actual migration flights southward were not noted. They probably occurred in the darkness.

Cyanocitta cristata cristata.—Blue Jay.

Present on all visits. It was common on the August 18, 19, 1908, visit, but in 1910 only two were found constantly, and they were in the larger trees in the vicinity of the swamp. They were unusually wary.

Corvus brachyrhynchos brachyrhynchos.—Crow.

There were Crows on all visits and during the 1910 stay, but none were seen in migration. The numbers were not accurately determined, but there were certainly upwards of ten present all the time.

Dolichonyx oryzivorus.—Bobolink.

Present on all visits, usually in migration flights. Some evidently nested in the interior of the island, but the great majority were from the north. The first definite migratory movement took place on July 19. Nearly every day thereafter flocks of Bobolinks were passing southward, usually high in the air. There was little or no hesitation about starting out over the water toward Kelleys, and there were no halts on the way, unless it be at Middle Island.

Molothrus ater ater.—Cowbird.

Present in small numbers on our arrival in 1910. The first migration seemed to occur on August 6, in company with the other species of this family, and such migrations in small flocks occurred nearly every day, the individuals becoming fewer, until the 24th to the 27th, when only one was noted each day, and none afterward. An occasional flock rested in the last trees of the point before essaying the flight to Kelleys. It was not always easy to identify these birds among the other blackbirds, unless they gave their whistle call.

Agelaius phœniceus phœniceus.—Red-winged Blackbird.

Common on all visits, and breeding in the marshes in considerable numbers. Many individuals were singing every day. Begin-

ning on August 10, 1910, flocks were seen migrating nearly every day. The predominant plumage was the post juvenal, until late in August and in September, when many males in nearly full plumage and singing were noted. Some of the larger flocks were noted coming from the direction of Point Pelee, but they may have flown southward along the east shore to near Saw Mill Point and then cut across the land to avoid either a long detour around the South Bay shore or the direct flight across the water to Middle or Kelleys Island. None were actually seen in transit from Point Pelee.

Sturnella magna magna.—Meadowlark.

About normally common on the inland parts of the island where the open field conditions were favorable. None were seen on any but the 1910 visit, because none of the others were extended into the interior. None were seen at the point nor any in migration.

Icterus spurius.—Orchard Oriole.

In 1910 only. Common upon our arrival and continuously so until August 26, then rapidly decreasing to one on September 1, and none after. There were certainly greater numbers than we are accustomed to on the Ohio shore, but the conditions for nesting seemed less favorable. It is altogether likely that many of these birds of Pelee Island came from further north.

Icterus galbula.—Baltimore Oriole.

The occurrences almost exactly parallel the last species, but lasted a few days longer. However, it ceased to be common on August 23, and the last one was noted September 5. The most notable thing about this oriole was the manner of migration, suspected but not so capable of demonstration with the last . The flocks for the first two weeks of August seemed to be wholly composed of young birds, or at least birds in the post juvenal plumage, with no other plumages mixed in. With the advancing days there came a scattering few rather dull colored males, increasing in brilliancy until the last flocks contained many brilliantly colored males. I am making no argument but merely stating the facts as we noted them. This same order of migration was marked on Point Pelee in 1911 also.

Quiscalus quiscula æneus.—Bronzed Grackle.

Present in considerable numbers on all visits. The first big flocks came in on August 10, 1910, and migrating flocks passed southward nearly every day afterward. On August 19, 1910, a flock of more than 3000 settled on the ground and in the trees just north of the Fishing Point swamp.

Carpodacus purpureus purpureus.—Purple Finch.

There were two seen and heard on August 13 and 29, and three on the 24th and 30th, 1910. These birds occasionally sang. They were among the cedars about the middle of the point.

Astragalinus tristis tristis.—Goldfinch.

Common on all visits. It was more numerous about the open fields north of the swamp than elsewhere, but was found in some numbers in the woods of the point and along the beach. An individual would occasionally start out over the water in easy bounding flight and be lost to sight. This bird often visits ships during their passage.

Poœcetes gramineus gramineus.—Vesper Sparrow.

A few noted in the fields inland under ordinary conditions.

Spizella passerina passerina.—Chipping Sparrow.

Found only in the fields of the interior of the island. We were too early to catch any migratory movement of this bird.

Ammodramus savannarum australis.—Grasshopper Sparrow.

Found about the houses inland — none on the point. While it was a familiar bird in the immediate vicinity of farm houses it could not be considered a common species on the island as a whole.

Spizella pusilla pusilla.—Field Sparrow.

Two were noted at the point on August 18, 1908, and it was present in the fields inland, and occasionally on the point during the entire 1910 study. It was much less numerous than on the Ohio shore, but numerous enough to be considered tolerably common.

Melospiza melodia melodia.—Song Sparrow.

Common on all visits and singing. A nest containing four eggs was found in a bunch of juniper near the limit of trees on the point on August 3. The young hatched within the next five days. This was the most uniformly distributed bird on the island. It could be found anywhere at any time, even well out on the bare sand spit, where it fed on material thrown up by the waves. Individuals were also seen eating the wild grapes and the cedar berries, and other fruits. It was difficult to identify any definite migratory movement of this bird became it was always abundant everywhere.

Pipilo erythrophthalmus erythrophthalmus.—Towhee.

There were only two individuals found, and they in the vicinity of the Fishing Point swamp. They remained in nearly the same locality, where they could be found at any time. One of them sang frequently.

Cardinalis cardinalis cardinalis.—Cardinal.

One of the characteristic birds of the woods of the point on every visit to the island. The range extended throughout the entire wooded belt of the point. During the days of greatest migration individuals made their way into the last bushes, and sometimes even to the drift brush of the sand spit. None were noticed in actual migration away from the island.

Zamelodia ludoviciana.—Rose-breasted Grosbeak.

Two were found on August 30, and one on September 5, 1910. These were in the woods in the vicinity of the swamp.

Passerina cyanea.—Indigo Bunting.

Common on all visits in the deciduous woods, particularly in the vicinity of the swamp. Some few individuals wandered out into the cedar belt. It was singing during the entire stay in 1910.

Piranga erythromelas.—Scarlet Tanager.

A male in bright plumage and a female were found among the oak trees bordering the Fishing Point swamp on the north on July 19, and one or both were found there on nearly every visit afterward. The male was still in full plumage on August 11.

Progne subis subis.—Purple Martin.

Present on all visits, and during the entire stay in 1910. There was no time when Martins were excessively numerous, but during the three distinct migration periods (see antea 105), they were more than common. The great flights were really swallow flights with Martins mixed in. On several occasions the evening fights were watched from an open field north of the swamp, from which point the most of the migrating birds were noted coming from a north-easterly direction across the Saw Mill Point land area. This is the exact direction of Point Pelee. Such flights were just above the tree tops.

† *Petrochelidon lunifrons lunifrons.*—Cliff Swallow.

The fact that this is the most difficult of the swallows to be certain of when it is mixed in with the others may account for its seeming scarcity. It was noted on all visits, and was present in the migrations during the entire 1910 study period, but only an occasional individual was certainly identified among the host of migrating swallows. Many of those seen were some distance away from the shore of the sand spit, very few being near it. Its manner of migration did not seem to differ from that of the other swallows.

Hirundo erythrogastra.—Barn Swallow.

Present in large numbers on all visits, and usually migrating. The flight was usually easy and deliberate, the majority of the

birds flying within a hundred feet of the water, but occasionally individuals mounted high in the air. The only days on which no migratory movements were noted were when a brisk to strong north wind was blowing. The largest movements occurred against a stiff south wind. Companies often gathered on the bare sand of the spit for a short rest before essaying the passage.

Iridoprocne bicolor.—Tree Swallow.

Except on August 6, 1910, when fifty were counted in the migrations, there were very few individuals of this swallow scattered among the migrating host. This seems strange when we found them in great numbers roosting on the lotus stems and leaves in the Cedar Point marshes later. This species can be so readily distinguished from the others that it is not likely that we overlooked many.

Riparia riparia.—Bank Swallow.

Everything considered this was the most numerous of the swallows on all visits to the island. It was in migration every day after July 20, except only when there was a north wind. The line of migration over and parallel to the sand spit was often half a mile wide. There was almost never a continuous stream of migration, but one bunch of the birds following another, so closely that there was at least one bunch within the range each minute during the heavier migrations. The depth of the migrating stream was seldom over 200 feet, and often much less.

Stelgidopteryx serripennis.—Rough-winged Swallow.

A close second to the last in point of abundance, and found on all visits to the island. Every migration of swallows contained many of this species. These flights of the swallows furnished a splendid opportunity for studying the characteristic actions of each of the species. The more deliberate flight of the Rough-wing as compared with the Bank was always noticeable. The flight also tended to be more straight-away, with fewer abrupt upward turnings. The Rough-wing gives one the feeling of great reserves of energy.

Bombycilla cedrorum.—Cedar Waxwing.

Present on every visit, and common in the cedar belt. These birds were strongly inclined to live in flocks. They fed upon the cedar fruit extensively, but were also seen to eat other fruits, particularly the wild grapes. They were decidedly more wary than the Ohio birds. Nests were not found, but it is wholly likely that extensive nestings occurred on the island.

Lanius ludovicianus migrans.—Migrant Shrike.

Seen only during the 1910 studies, when a pair was found in the border of the fields north of the Fishing Point swamp. The nest was not found.

Vireosylva olivacea.—Red-eyed Vireo.

Present on all visits to the island, and in numbers sufficient to be called common. In 1910 it was pretty closely confined to the deciduous trees until the migrations began, when it spread all over the point, and increased in numbers. The singing was incessant during daylight.

Vireosylva gilva gilva.—Warbling Vireo.

A few pairs seemed to have nested on the island in 1910, and these, with others, were found on the point during the migration waves. There was not much singing among these birds. They affiliated with the warblers, feeding among the cedar trees.

Mniotilta varia.—Black and White Warbler.

Found on all visits to the island. In 1910 the first was noted on August 11, and every day thereafter. It became common on the 17th, and remained common during our stay. There were birds in all stages of plumage, but the young plumages predominated. No places seemed to be especially preferred.

†† *Protonotaria citrea.*—Prothonotary Warbler.

We found one individual in full plumage on the north border of the Fishing Point swamp, in the early morning of August 22, 1911. This bird was leisurely feeding on some moth, and permitted us to approach within ten feet. It uttered only the chipping note peculiar to this species.

† *Vermivora pinus.*—Blue-winged Warbler.

There were two seen on August 26, and one on September 1, 1910, in the cedar trees near camp. We had expected to find this warbler in some numbers in the deciduous belt near the swamp, but were disappointed. The three seen were clearly not breeding birds.

Vermivora chrysoptera.—Golden-winged Warbler.

One was recorded on August 27 and 28, 1910, in the cedar trees near camp. There was no evidence that they were not migrating individuals.

Vermivora rubricapilla rubricapilla.—Nashville Warbler.

Found in 1910 only. The first was recorded on August 15, and the birds were in considerable numbers after the 16th. This species was one of those showing marked fluctuations in numbers

during the waves of migration. It was distributed everywhere, but was less numerous at the swamp than among the larger trees and in the cedars.

Vermivora peregrina.—Tennessee Warbler.

It was present in some numbers on September 1st, 1905. The first seen in 1910 was on August 15, a single bird; the next on the 17th, two birds, and from the 18th to the end of our stay it was one of the common birds scattered everywhere among the trees and bushes.

Dendroica tigrina.—Cape May Warbler.

This was one of the pleasant surprises of the 1910 study. On the Ohio side it has always been scarce in spring and absent in fall. We noted the first one on August 19, the next on the 22d, the next on the 25th, it suddenly became common on the 26th, and remained so until September 1, when there was a marked decrease and the last was recorded on the 5th. The unwariness of this warbler made it possible to study the various plumages at close range. Specimens of every phase of plumage were collected. The first birds to appear were in the juvenal plumage, and it was only during the last week of our stay that perfect plumaged birds were seen. We had many about our mess tent during meals.

Dendroica æstiva æstiva.—Yellow Warbler.

Common on all visits, and common in 1910 until September 2. The last was seen on the 2d. Individuals were singing up to the last day. While there were more individuals in the vicinity of the swamp than elsewhere, there were many scattered over the whole of the point, after the migrations began. Occasionally individuals would flit down to the last brush on the point, or even occasionally fly well out upon the sand spit, or even essay the crossing to Middle Island, but most of them came back. Numerous nests were found in the vegetation of the swamp.

Dendroica cærulescens cærulescens.—Black-throated Blue Warbler.

It was present in small numbers on September 1, 1905. The first to appear in 1910 was on August 26, two, and after that date a few were found every day until we left the island. The birds kept well down among the cedars and the brush of the deciduous woods. A few were found in the button-bushes bordering the swamp. All phases of plumage were noted.

Dendroica magnolia.—Magnolia Warbler.

Present on all visits in fair numbers. In 1910 the first seen was on August 19, the next on the 21st, and every day thereafter until we left. It became decidedly common on August 30 and remained

so to the day of our departure. The distribution over the point was uniform, but the birds, as is their wont, remained well down in the trees and bushes. No birds in full spring dress were seen, but there were all other plumages.

Dendroica cerulea.—Cerulean Warbler.

None were found except in 1910. The first were noted on August 11, three, the next on the 13th, one, and after the 15th, when five were seen, several were recorded every day until September 3, after which date none were found. It is doubtful if there were any breeding birds on the island. Conditions such as the birds breed in in northern Ohio were wanting anywhere on the island, as far as we investigated.

Dendroica pensylvanica.—Chestnut-sided Warbler.

It was present on August 18, 1908. In 1910 the first was seen on August 19, two, and every day afterward several individuals were noted. It was common on only one day, September 1. All plumages were represented. Almost no individuals were seen except in the immediate vicinity of the swamp, where the birds were feeding among the button-bushes.

Dendroica castanea.—Bay-breasted Warbler.

It seems a little strange that none were seen except in 1910. The first recorded was August 11; the next, the 15th, two, the 18th, three, and after that a few every day until September 1, when there was a great influx. It remained common until we left. Until it became common one had to look for the individuals in the deciduous trees near the swamp, but the greater numbers spread over the whole of the point. Most of the individuals were at least tinted with bay on the sides. There were none in full spring dress.

Dendroica striata.—Black-poll Warbler.

None except in 1910. The first was on August 11, two, and there were a few individuals every day after until the 26th, when it became common and remained so until we left, on September 7. The first individuals of this and the last species had to be collected in order to make certain of identification. It was usually possible to approach near enough to make out the yellowish edging of the wing feathers of this, or the bay tint of the sides of the Bay-breasted. We found this species more widely distributed than the last while its numbers were few, but when it became common it was everywhere present, like the last. Only fall plumages were seen.

Dendroica fusca.—Blackburnian Warbler.

It was found on August 29, 1905. The first in 1910 was on August 11, one individual in nearly full plumage, and ever day af-

terward it was present in considerable numbers and in all plumages. It became decidedly common on August 23, and remained common until we left. It was as numerous among the cedars as elsewhere, and worked well down to the limit of vegetation on the point. A few individuals were seen to fly toward Middle Island during the day.

Dendroica virens.—Black-throated Green Warbler.

1910 only. The first was August 20, two; the next, the 21st, one; and on each day afterward, becoming common on the 31st, remaining so to the end. We had reason to suppose that it might be found breeding on this island since it breeds occasionally in the river gorges of northern Ohio, but any evidence of breeding was lacking. There were a few birds in nearly full spring dress, but the most were in the juvenal plumage. None sang.

Dendroica vigorsii.—Pine Warbler.

At least one pair was found breeding, in 1910, upon our arrival. The male was singing, and continued to sing until the middle of August. Both parents were seen carrying food into the top of a dense cedar tree. There was a distinct increase on August 24, and the birds were more numerous than at first to the end of our stay.

Dendroica palmarum palmarum.—Palm Warbler.

Found only in 1910. The first August 22, two; the next, the 26th, one; 27th, two; 28th, three; 31st, one; September 1st, one. They remained near the ground at all times, but did not seem to be partial to the vicinity of the swamp. We expected to find more of them.

Dendroica discolor.—Prairie Warbler.

Several were noted on August 18, 1908. The first seen in 1910 was on August 20. The complete records follow. August 20, 1; 27, 5; 28, 2; 30, 2; 31, 1; September 2, 2; 3, 2. It was usually found along the borders of the cedars, or in the smaller cedars which grew in the hollows between the ridges. Some were found at the limit of vegetation on the point. Juvenal plumages prevailed, but one bird was in full spring dress.

Seiurus aurocapillus.—Oven-bird.

One was found on August 18, 1908. In 1910 it was evidently breeding in close proximity to the swamp, in the deciduous woods. From September 1 to the end of our stay it was decidedly common, then ranging well into the cedars, and even roving down upon the brush of the point.

Seiurus noveboracensis noveboracensis.—Water-Thrush.

On September 1, 1905, it came in with other migrating birds in some numbers. In 1910 it was first seen on August 7, one individual was taken, another one on the 10th, another on the 21st, and on and after September 1st it was common, ranging everywhere among the cedars, and down upon the point in the dead brush. "Squeaking" always resulted in bringing these birds within a few feet of one. The opportunities afforded for comparing this with the next species were improved to the extent of learning certain individual traits of difference. The alarm note is easily distinguished when once learned.

Seiurus motacilla.—Louisiana Water-Thrush.

Evidently breeding in 1910, in the vicinity of the swamp. It was seen on September 1, 1905, and on August 18, 1908. It became common on August 28, 1910, and continued so until we left. It remained more numerous in the vicinity of the swamp at all times, but individuals occasionally strayed down to the point along the east beach. This and the last species could sometimes be studied together from my tent door. The slightest movement on my part would send them scurrying away.

Oporornis agilis.—Connecticut Warbler.

Found only in the vegetation along the border of the swamp. The records follow. August 21, 27, 29, September 1 and 2, 1910, one bird on each of the dates given. The birds kept well to cover, and would not flush.

Oporornis philadelphia.—Mourning Warbler.

In contrast to the last species, this bird was found among the cedar trees, either on the ground or among the lower branches. In the middle of the day individuals would sometimes visit the camp and feed unconcernedly as long as we remained quiet. The records follow. One on each of the following dates—August 15, 27, 28, 29, September 2, and two on September 1 and 3, all in 1910.

Geothlypis trichas trichas.—Maryland Yellow-throat.

One of the commonest and most characteristic birds of the region of the swamp. It also ranged down the point to the limit of vegetation, on the days of strong migration. It was found on all visits to the island, and some individuals were singing each day. In 1910 it was common up to August 23, after which only a few were seen each day. Nests were not found, but there is little question that the birds nested on the island.

Icteria virens virens.—Yellow-breasted Chat.

There was every reason to expect this bird to breed regularly on the island, but the only records are August 18, 1908, and Au-

gust 15, September 5-6, 1910. On the last date a bright plumaged bird came to the opening in my tent and remained in an enquiring attitude until I made a movement in the direction of the camera, when he skurried away with a loud chatter.

Wilsonia pusilla pusilla.—Wilson's Warbler.

The first seen was on August 12, four the next day, and a few each day until the 30th, when it became common and remained so to the end. None seen except in 1910. While the numbers remained few the most of the records were made at the swamp, but when the birds became common they spilled over among the cedars, and ranged to the limit of vegetation on the point. They were not at all wary, and permitted close approach.

Wilsonia canadensis.—Canadian Warbler.

It was present on September 1, 1905, and in 1910 the first was noted on August 11, the next on the 13th, and beginning with the 15th there were several recorded each day during our stay. It seemed to be pretty closely confined to the underbrush in the vicinity of the swamp, but occasionally it wandered down the point among the cedars. On September 1, 1910, it was recorded as tolerably common. On that day it was found at the limit of vegetation on the point.

Setophaga ruticilla.—Redstart.

Present and in sufficient numbers to warrant being called decidedly common on all visits to the island. It was evidently breeding in considerable numbers in all of the woodlands visited. In 1910 it was singing during the entire time of our stay.

Dumetella carolinensis.—Catbird.

Found on all visits to the island in small numbers. Pretty closely confined to the region of the swamp, but occasionally found among the cedars and in the shrubery along the west beach. The scarcity of this usually common species was the most notable thing about it.

Toxostoma rufum.—Brown Thrasher.

Present and common on all visits. About the first bird seen when one lands near the limit of vegetation on the point. It was the most numerous in the bushes along the west beach where the wild grapes were abundant, and many individuals were seen eating the grapes. There seemed to be a noticeable increase in numbers when the first migratory movement occurred, about August 12, but no birds were seen to cross to Middle Island, and none even made the start in daylight.

Thryothorus ludovicianus ludovicianus.—Carolina Wren.

Present on all visits, but clearly less numerous in 1910 than at any other visit. The colony noted in 1905 had disappeared with the tangle by the cutting of a road through to the east beach, and the birds had moved to the border of the swamp, and seemed to be scattered somewhat. The evidence seemed to point to a somewhat precarious foothold on the island, possibly due to the fact that this is about the northernmost limit of the species.

Troglodytes aëdon aëdon.—House Wren.

We found a pair near a house north of the swamp, and another pair at the store on the west side of the island. None had appeared in migration at the time of our departure, September 7, 1910. One is at a loss to account for the scarcity of this adaptable wren on the island where nesting places are plentiful and where its natural enemies seem to be few.

Telmatodytes palustris palustris.—Long-billed Marsh Wren.

Apparently there had been only one nesting at the swamp. We found seven or eight individuals there on every visit. One of the birds continued to sing every day during our stay. None were found at the north end of the island, where conditions for nesting were rather more ideal than at the Fishing Point swamp.

Sitta carolinensis carolinensis.—White-breasted Nuthatch.

The only record for the island, strange to say, is the single individual found in the trees at the north border of the Fishing Point swamp on September 1, 1905. If any had been present in 1910 they would certainly have been found by some of the party.

Sitta canadensis.—Red-breasted Nuthatch.

It was present in considerable numbers on September 1, 1905. In 1910 the first one was seen on August 19, and every day thereafter until the 26th a few were recorded. On the 26th it became common and continued so to the end of our stay. It clearly preferred the cedars, where it fed much after the manner of the Black and White Warbler, with which it was associated rather more than with other warblers. On the great migration of September 1 it seemed to swarm all through the cedars, and even into the brush on the point.

Polioptila cærulea cærulea.—Blue-gray Gnatcatcher.

Found only in 1910. Then it was found only in the cedars. The records follow. August 21, 6; 22, 3; 23, 1; 27, 4; 28, 5; 30, 1.

Hylocichla mustelina.—Wood Thrush.

August 31 and September 1, 1910, one each day. These were clearly migrating birds. We made thorough search everywhere for

this thrush without success. Everything, as far as one could judge, was favorable for the nesting of this species on the island.

Hylocichla fuscescens fuscescens.—Veery.

One was recorded on August 18, 1908, and the following records for 1910: August 26, 2; 27, 1; 28, 3; 30, 1; 31, 1; September 1, 6. These were clearly migrating birds. Careful search was made for the thrushes at the beginning of the 1910 work, in the expectation of finding this species nesting in some numbers, but none were found.

Hylocichla aliciæ aliciæ.—Gray-cheeked Thrush.

The only certain record was one taken on September 3, 1910. It seems likely that there must have been a distinct migration, either unnoted by us or else after our departure. The light was often so poor, in the thick growth of the cedars, that it was not possible to make certain of the identification of the swarming thrushes.

Hylocichla ustulata swainsoni.—Olive-backed Thrush.

As recorded elsewhere (antea, p. 16) the Olive-backs became suddenly common on the morning of August 31, 1905, and continued so while we remained on the island. Other visits were too early. In 1910 the first was found on August 29, the next six birds on September 1, and several each day while we remained, but there was no big rush such as occurred in 1905.

Planesticus migratorius migratorius.—Robin.

Present on all visits in considerable numbers. There were more seen inland than on the point, and no migratory movement was noted. Of course the birds nested on the island.

Sialia sialis sialis.—Bluebird.

There were a few records for the point, none of migrating birds. The birds were not uncommon in the interior of the island, where they had evidently nested.

One of the surprising things which this summer and early autumn study on Pelee Island brought out, and which it needed the following summer's work on Point Pelee to corroborate, was the evident southward movement of young birds in advance of the old ones. This was first noticed in the Cowbird and Red-winged Blackbird, and later in both orioles and practically all of the warblers. With the swallows and martins it was not so clearly marked because the old and young plumages are not so readily distinguished. I

am not prepared to say that the companies of young were unaccompanied by old birds, because in the nature of the case it was not possible to carefully scan every bird in flocks of twenty or more. However, in the case of the Cowbirds the early flocks were small and no old birds of either sex were seen with the young, and it is not at all likely that there were in fact, for it is well known that the young of this species do not gather with the adults until relatively late in the summer.

Of course this reversal of what we have come to accept as the normal order of southward migration may be purely local, due to the peculiar topographical conditions of the region, but it seems to me that even this supposition is hardly capable of logical demonstration. The very last Baltimore Orioles to migrate were brilliant males, and the first noted on the island were clearly young birds. If the same thing had not happened on Point Pelee the next summer, when weather conditions were markedly different, and the migrations much less crowded, one might well believe that the conditions in 1910 were local. One has suggested that as the conditions are clearly local on Heligoland, which occupies an unique position, so the unique position of Point Pelee and Pelee Island may also be clearly local. This still further emphasizes the need for coöperative work over a wide area simultaneously. There ought to be competent observers stationed at short intervals from Toronto to Milwaukee, inland as well as along the shore of lake Erie, and several lines from western New York westward as far as Chicago or farther, for both southward and northward migrations. Unless observations are made every day the results are only approximate. They ought to be continuous, but who of us can spend all of his time in outdoor bird study?

THE BROWN THRASHER, (TOXOSTOMA RUFUM) EAST AND WEST.

BY ALTHEA R. SHERMAN.

Various changes in the habits of some North American birds are so well known that only the briefest reference to them is necessary, such changes as have occurred in the choice of nesting places by the Chimney Swift, the Purple Martin, and the Barn Swallow since the advent of the white man on this continent, or more recently changes in the nest site and feeding habits of the Nighthawk, since the introduction of electric lights into our cities. If similar changes are taking place in other species it is of importance to know them, and to ascertain, if possible, the extent of the variation in habits and the causes that have led to these changes

For several years the descriptions of the habits of the Brown Thrasher that have appeared in various ornithological writings, have led me to think, that there may be sectional variations in the behavior and habits of this species, and this impression has been deepened by conversations with several of its observers, whom I met at the recent meetings of the American Ornithologists' Union in Cambridge, Mass. It is hoped that this article will call forth testimony from others, that will show whether or not there do exist real differences in habits, and in case there are such, that thereby they may be placed on record for the benefit of future workers, who may be able to discover the causes of these changes, also in which region it is that the species is divergent from typical Brown Thrasher behavior. In matters of this kind the observations of one person through a series of years cannot cover thoroughly anything other than a small area; and it is possible to reach satisfactory conclusions only after securing testimony from many regarding their small fields of observations.

Since the view point of others with whom I have spoken refers chiefly to eastern Massachusetts birds, and my own observations have been made in northeastern Iowa, it is to

Brown Thrashers in these localities that references are herein made. The variations, believed to exist, relate in main to their choice of habitats, and nesting sites, to the apparent shyness of the species in one locality and its boldness in the other, to which is added some comparison of the relative abundance of the species in the two regions. I am told that it is not a common species in eastern Massachusetts, whereas I class it as such in northeastern Iowa. Its abundance in my neighborhood in 1912 is shown by this: A half dozen pairs located their nests within a quarter of a mile of our house; two pairs of Brown Thrashers nested on our grounds each bringing out two broods, the next pair was about six hundred feet to the northeast, and again to the northeast an eighth of a mile from the third nest was the fourth pair, a quarter of a mile westward of it was the fifth pair, and the same distance to the southwest of their nest was the sixth pair.

In eastern Massachusetts it is said to be a nesting bird of the woodlands, rarely coming close to the homes of men to build its nest. This may in part be due to the pruned, trimmed, and shaven condition of trees, shrubs and lawns. I remember once seeing a pair nesting in a hedge quite near a house at Quaker Hill in eastern New York. It is a bird that seeks a bit of thick and tangled growth in which to build, but in Iowa it finds such places to its taste in the man-planted trees and shrubs that grow upon prairie soil, usually not far from human homes. It is eminently a house-yard bird, although it sometimes nests in patches of bushy second growth that have sprung up on clearings made in the woods.

Its nests in Massachusetts are said to be either on the ground or in bushes from a foot to three feet from the ground. In Iowa I have never found a nest nearer than eighteen inches or two feet of the ground, one of these being in the lower branches of a spruce tree, the other in a brush pile. Another was found built in a brush pile, but farther from the ground, these are the only nests thu-

situated that have been found, but brush piles on prairie land are rare. The next locations nearest the ground are where nests are built in such bushes as gooseberry, lilac, and syringa, when they are from two to three feet above the ground. The highest nest situation found was one in a tame crabapple tree about ten feet up; other trees frequently used are spruce, willow, apple and plum trees in which a majority of the nests are about five feet from the ground, always a trifle too high for women of medium height to look into without a box or chair to stand upon.

It is the behavior of Brown Thrashers as described by New England observers that suggests their greatest variations from their kindred in the Middle West. Description of the actions of the species in the former place seem to emphasize its shy and skulking habits. Whether the Iowa Brown Thrashers are shy or bold may be gathered from the following account of them.

In our household it is one of the best beloved of our birds, even the manner of its arrival in the spring setting it apart from the others, its return to us bringing a leap of the pulse, and a pleasurable thrill surpassing that felt for our other summer companions. Our first arrivals, the Prairie Horned Larks, may be heard on the first mild evenings after the middle of February, as they bid each other "Goodnight," and retire behind their respective clods of earth, but these birds are out of sight in some neighboring field. Undemonstrative Robins and Bluebirds next appear without signs of joy or familiarity, to be followed soon by Blackbirds and Meadowlarks, that sing their pleasure in muffled voices, as if they had caught bad colds as they journeyed northward; Sparrows, Shrikes and several other species succeed them in much the same manner, until the last days of April or the first of May, when in the gray dawn of some morning the wakeful one of the household steals down the stairs to arouse the heavy sleeper exclaiming: "Do you hear that? The Thrashers have come!" and later the neighbors say: "Your Thrashers have come! I heard them singing at break of

day." One is pretty certain to be in sight on the topmost twig of one of the tallest trees pouring forth his full-throated joy. Perhaps one reason for our fondness for him is because he seems so glad to get home, and another, because he makes the yard his summer home in the fullest sense of the word; there having been seasons when the Brown Thrasher has been seen on the place every day from its arrival in the spring until its departure in late September.

Sometimes the male comes first, at other times the pair arrive together, and the merry, rollicking spirit they show suggests the home-coming of children from school; but play and song are of short duration, and the pair settle down to the serious business of the summer season. One is forced to admire the sane, broadminded views taken by the male Brown Thrasher. He believes in and asserts his rights to claim an equal share in the affairs of life. He does his half in the building of the nest, in the incubation of the eggs, in the brooding and feeding of the young, and caring for them after leaving the nest.

If it be true that actions speak louder than words, then our Brown Thrashers are among the loudest speaking of birds. Some of their first plain talk relates to the selection of the nest site. As they slip in and out of a certain crotch in some tree, they have told us plainly on several occasions, that this was their choice of nest site before a single twig was laid; and to convince ourselves that we had judged rightly we have visited the tree, and have been scolded roundly for the intrusion by at least one of the Brown Thrashers. The first nest is usually built before any foliage appears on the trees, consequently the operations of nest-building are as much in evidence as it is possible for them to be. Often the nest is plainly visible until some time after the young leave it. Once there was chosen a dead plum tree that blew over a few days after the young had left the nest. These remarks refer more particularly to nests in our yard, which most frequently are built in plum trees; when placed in other trees or in bushes they are not so conspicuous. A

proof of the openness of the Brown Thrasher's conduct and habits is given by note-books, devoted to detailed records of all observations on the home life of the birds of the door-yard, which show ten pages filled with notes on the life of the Brown Thrasher, to every page recording the doings of that familiar bird, the Robin. This has come about without neglecting the Robin, simply because the Brown Thrasher affords that much more for noting and recording.

So much in sight are the actions of the Brown Thrasher, that they may be read as plainly as an open book, even more easily by some of us, who can translate them without the aid of spectacles, which we must use for reading books. To be sure when the nest has received its first egg one of the pair, crouching low, in an attitude very suggestive of slyness, probably will slip along the top board of the fence for some distance, but he is only acting a part, there being no real skulking in the boldness with which he thus tries to draw the intruder from the neighborhood of his nest treasure.

By the openness of his activities we have come to recognize the incipient signs of nidification, to know when to look for the first egg, the hatching of the young, also when he begins to "whirr" at the cat that his young are ready to leave the nest, and that it is time to imprison his feline enemy, and to ask the neighbors to shut up their cats; we know when to expect him to show his offspring how to pull up the new blades of sweet corn for in this bad trick he does not indulge until the second planting of corn begins to appear above ground; when with a May beetle in his bill for feeding a well-grown young one, he pauses to utter a snatch of song, we know that is is time to watch for the beginning of his second nest. Thus openly he passes his life until the moulting time comes when little is seen of him, but he cannot be called much more of a skulker than the other birds about him.

BROWN THRASHER AT GRINNELL, IOWA, IN THE YEARS 1870 TO 1890.

It is entirely possible that the conditions of which I speak have materially changed, and that bird students at Grinnell will need to say that these interesting birds have shown a capacity for adapting themselves to changing conditions. This would be interesting indeed.

Grinnell lies in a typical rolling prairie region, with natural woods bordering the streams. These woods were of deciduous trees wholly, with thickets of hazel brush on the fringes, wild crabapple and wild plum thickets usually near the fringe but sometimes well within the woods, and with hawthorn and wild gooseberry characteristic of the broader wooded bottomlands where box elder trees predominated. As the country became settled many osage orange hedges and willow wind-breaks sprang up. My serious bird studies did not begin until the era of hedges and wind-breaks was ushered in, and until the hazel brush patches appeared on many previously exclusively prairie hillsides, these patches affording an invironment in which such trees as wild crabapple, hawthorn, wild black cherry, choke cherry, quaking aspen, and finally over-cup oaks appeared.

The Brown Thrasher is associated with my earliest recollections as one of the most familiar birds. I find in the notes of an older brother who began making a collection of eggs about 1872 the statement that the Brown Thrasher (Thrush he has it) nested in the wild crabapple, hawthorn, and wild gooseberry, less commonly in the hazel bushes. No mention is made of the hedges and wind-breaks which were small then. These nests appear to have been placed from two to ten feet from the ground, if old data records are accurate.

In my experience the Brown Thrashers were inseperably connected with Osage orange hedges, and to a lesser degree with the willow wind-breaks. Some nests were still built in the wild crabapple and hawthorn thickets, occasionally in hazel bushes, and one remarkable situation was on the ground in the midst of an old brush pile.

Just at the close of my studies at Grinnell there appeared to be a tendency for the Thrashers to prefer the premises of the houses which had originally been built upon the open prairie, about which thickets of the sort Miss Sherman mentions were growing up, but there was no diminution of the numbers in the hedges.

BROWN THRASHER AT OBERLIN, OHIO.

The species is not at all common as a breeding bird, although it may become common for a day or more during the spring migration. Here the Osage orange hedges seem to be not only the favorite nesting places, but some nests in orchards, a few in the hawthorn thickets and red cedar trees, and occasionally a nest is found in a brush pile. This was once a densely forested region, and therefore it is altogether likely that the Thrashers were originally confined to the river gorges where such thickets as they normally inhabit were to be found.

LYNDS JONES.

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Editorial

The report of the Secretary of the Bird Branding Association at the Cambridge meeting of the A. O. U. emphasized the importance of bird branding as a means of determining bird movements. The report clearly showed that the bands worn by the birds in no way imperiled the life of the bird. We of the United States are far behind Europe in this important line of investigation, but if evry person who can do so will undertake to place bands upon birds when opportunity offers, we shall soon be abreast of the Europeans. This is a plea for more banding, and it is addressed to you.

—o—

The policy of the editor of this Bulletin is to publish only articles of high standard, field notes of interest and value, and reviews which will attempt to give a resumé of the publication reviewed with constructive rather than destructive criticism. That the editor has failed to realize his high standard goes without saying. It has sometimes been due to a desire to encourage some beginner to better effort, sometimes to good nature or a shrinking from giving pain in a refusal, and many times to a dearth of material such as he ought to have at hand to choose from. He expects to hold more nearly to his ideal, beginning with the 1913 volume. An acceptable

article should contain some contribution to ornithological knowledge. Acceptable notes should contain some information. Personal notices should be of general interest. Prospective contributors who bear these matters in mind before sending contributions, and making sure that the matter to be submitted conforms to them, will save the editor embarrassment and valuable time.

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Winter conditions have probably set in, as far as the birds are concerned, the country over. Bird studies ought not to be permitted to lapse because the birds are few and the weather cold. Certain problems connected with bird movements must be worked out during the season of ice and snow. Is there a sudden influx of birds into your region which you cannot account for? Consult the weather records and determine whether there is not something to be learned of the reason from that source. About Thanksgiving time the whole of the northern part of Ohio was covered with snow except a small area in the region of Oberlin. This clear area was well supplied with birds. Problems like this are of no small interest and value in relation to larger problems of distribution. Last winter was especially noted for the large numbers of Robins which passed the winter north of their usual winter sojourn, and thereby many seem to have perished. Large numbers of Bluebirds also seem to have been killed by the severe winter. Is there anything akin to the same conditions the present winter in your locality?

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Responses to the Questionaire which was sent out to members in November have come in to a gratifying extent. The negative votes on any of the propositions which the Executive Council offered are so few as to be almost negligible. Thus out of a total vote of 70 but four vote "no" on the first and third propositions, and but one on the second. It therefore seems clear that the changes are authorized. The kind expressions which have accompanied very many of the returned blanks indicate a most wholesome and lively interest in the Club and its official organ. These expressions are a vote of confidence in the function and future of the Club which it is good to know of. The net gain of the plan for the forward movement, as we see it, will be an affiliation of the bird students of the Interior of the county into any organization which will have for its object the working out of problems peculiar to the region. It also contemplates personal acquaintance at the meetings which it is proposed to hold at various convenient points. Hitherto there have been no other opportunities for per-

sonal acquaintance than chance meetings, or attendance upon the meetings of the A. O. U. Few persons find it possible to go so far as it is necessary to go in order to be present at the A. O. U. meetings,, and it does not seem feasible to schedule the meetings in the Interior at the present time. With the working out of the plan for annual meetings in the Interior everybody will be in sufficiently close touch with some meeting place to make it possible for him to attend. The Cooper Club on the Pacific side, the A. O. U. on the Atlantic, and the Wilson Club in the Interior. We believe that this movement will prove of great advantage to the cause of Ornithology everywhere.

The thirtieth stated congress of the American Ornithologists Union convened in Cambridge on November 11, 1912, in the museum of Mr. William Brewster, at 8:15 in the evening. Routine business was transacted, reports received and members elected. Mr. C. William Beebe of New York City, Edward Howe Forbush of Westboro, Mass., and Louis Agassiz Fuertes of Ithaca, N. Y., were elected Fellows: Frederic H. Kennard, Newton Centre, Mass.; Dr. John C. Phillips, Wenham, Mass.; Miss Althea R. Sherman, National, Iowa; Alexander Wetmore, Washington, D. C.; and Norman A. Wood, Ann Arbor, Mich., were elected Members, and 184 to the class of Associate Members. On Tuesday, Wednesday and Thursday mornings, and Tuesday and Wednesday afternoons public meetings were held in the University Museum, when papers were presented. Nine of the twenty-one papers were illustrated with lantern slides, and two others with specimens. It was especially gratifying to see, in a cage, a real live Heath Hen, from the colony on Marthas Vineyard Island, where the last of that interesting race are now being protected and permitted to increase.

The meetings were largely attended, and a wholesome interest was shown. Cambridge is noted for its large number of bird students, and the attendance of those not members gave clear evidence of the truth of this statement.

Many of the members accepted the invitation of Col. John E. Thayer to visit his estate and museum at Lancaster, Mass., on Friday, and were more than repaid by the splendid entertainment afforded by Col. Thayer. No collection in the country can equal the Thayer collection in the number of rare specimens and books which he has gathered there. This visit was a fitting climax to a most enjoyable and profitable meeting of students of the birds.

General Notes

FROM MORTON PARK, ILLINOIS.—On February 19, 1912, I saw a Snowy Owl (*Nyctea nyctea*) flying low, about 7:30 in the morning.

On April 26, 1912, a Mockingbird (*Mimus p. polyglottos*) spent the most of the day in our back yard.

These are rare records for this place.

We have noticed a scarcity of Bluebirds in the region this year.

ORPHEUS M. SCHANTZ.

THE CASE OF THE BLUEBIRDS.—While in northern Ohio the Bluebirds were clearly fewer in number than in previous years during the earlier part of the spring and summer, from Oberlin to Toledo they were in as large numbers as in any year during September and early October. The fact that a considerable majority of the birds seen were in the juvenal plumage indicates that the relatively few old birds which did return to their regular breeding places must have been more than usually successful in rearing young. On the writer's farm the two pairs out of the five of the previous year which returned successfully reared two broods of five each. As late as the middle of September these 24 birds were keeping together and feeding in the oat stubble and the corn fields and orchard, near where they made their nests. LYNDS JONES.

SOME CEDAR POINT-HURON, OHIO, NOTES.—On October 21, 1912, the writer and Mr. H. G. Morse of Huron, spent the day along the lake shore from Huron west on the Cedar Point sand spit some three miles. Of the list of 36 species noted the most interesting were the single Palm Warbler, the single Hermit Thrush, the 6 Red-backed Sandpipers, 2 Sanderling, 8 Black-bellied Plovers, 1 Spotted Sandpiper, the singing Meadowlarks and Bluebirds and Rusty Blackbirds, and the great numbers of Horned Grebes in the lake, all in winter plumage. Mr. Morse writes me that the Black-bellied Plovers and the Red-backed Sandpipers remained in the vicinity of where we saw them for a week. He also writes that a Surf Scoter (*Oidemia perspicillata*) was shot at Huron on October 26, a Barn Owl (*Aluco pratincola*) on November 15, and a Snowy Owl was seen near Rye Beach on November 10.

LYNDS JONES.

NOTES FROM THE TRI-RESERVOIR REGION.

From October 1st to the 10th fully 17 Wood Ducks (Aix sponsa) were killed on the Grand Reservoir, showing that this duck is on the increase. One of these, a fine male in full nuptial plumage, killed October 11th, was sent me and is now in my collection.

On October 15th and 16th six females of the White-winged Scoter (Oidemia deglandi) were shot on the Grand Reservoir, but unfortunately I could not get one for my collection. They are considered good table ducks by local hunters who know them by the misnomer. "Muscovy Ducks." As this name may be applied elsewhere it may pay ornithologists of the Middle West to seek for them among sportsmen by that name.

On November 19th I heard of a giant hawk, spreading 7 feet one inch, being shot two miles from town. I drove out to the place on the next morning and was presented with a fine female Bald Eagle (Haliaetus leucocephalus) approximately 2½ years old. It had been killed on the wing by two loads of No. 6 shot in the early dawn, being mistaken for a hawk.

In the year 1911 a farmer and fisherman found a duck nesting in the hollow and shallow top of an old stub in the Grand Reservoir, about 15 feet from the water. He stated it to be a "Black Mallard," and upon placing my series of about 200 different ducks before him he invariably picked the Black Duck (Anas rubripes) as the bird that had nested there in the spring of 1911. As the Black Duck has nested here in former years, there would be nothing out of the way about it still doing so occasionally, but the nesting site is certainly unusual. The man's veracity cannot be doubted and his familiarity with the species of ducks in this neighborhood serve to increase the probability of the record. For several years I have been of the opinion that the Black Rail would be found here, and several times when at the Reservoir I was certain I had seen this species. During this summer a Mr. McGill saw the Black Rail (Porzana jamaicensis) at the Grand Reservoir and the reason he did not shoot it was that being too close to the bird and having only heavy shot, he would have torn it to shreds. Now, Mr. Mac Gill is the man who furnished Mr. Dury of Cincinnati with one of his specimens of this species taken in Ohio and being himself a good entomologist, ornithologist, and taxidermist, certainly could not be mistaken in his identification of the species. The future will no doubt show this species to be a rare breeder at the Grand Reservoir.

On September 27th I saw a pair of Caspian Terns (Sterna caspia) at the Grand Reservoir.

New Bremen, Ohio. W. F. HENNINGER.

NOTES FROM SOUTH DAKOTA.

May 14, 1911, I was around a partly dried up slough that is located about eight miles southwest of Sioux Falls, and while there had the good fortune to run across two Stilt Sandpipers. I approached to within a couple of rods of them and with the aid of eight-power binoculars I fully identified them. They were feeding together in the water among a flock of Wilson Phalaropes, Lesser Yellow-legs, and others.

A JUNE BIRD DAY NEAR SIOUX FALLS, SOUTH DAKOTA.—June 11, at 7 a. m., started on a bird hunt, which lasted until 8 p. m. Took in the woods along Big Sioux river and Skunk creek—fields, prairies, meadows and a couple of small, nearly dried up sloughs. The sky was overcast most of the time and a heavy wind from the northwest was blowing steady all day long. The result:

1. Black Tern.—Common around the sloughs.
2. Hooded Merganser.—Fourteen seen on the river.
3. Mallard.—Three in the sloughs.
4. Blue-winged Teal.—Common in the sloughs.
5. Shoveller.—Common in the sloughs.
6. Lesser Scaup Duck.—Common in the sloughs.
7. Bittern.—Common.
8. Green Heron.—Common along Skunk creek.
9. Black-crowned Night Heron.—Common.
10. Coot.—Only two or three.
11. Wilson Phalarope.—Common about the sloughs.
12. Pectoral Sandpiper.—Common about the sloughs.
13. Baird's Sandpiper.—One with the Pectorals.
14. Lesser Yellow-legs.—Only two.
15. Upland Plover.—Common on the prairies.
16. Killdeer.—Common around the sloughs.
17. Spotted Sandpiper.—Common along the river.
18. Bob-white.—Two.
19. Prairie Chicken.—Two.
20. Mourning Dove.—Common.
21. Marsh Hawk.—One.
22. Yellow-billed Cuckoo.—Common along the river.
23. Black-billed Cuckoo.—Not as common as the Yellow-billed.
24. Belted Kingfisher.
25. Hairy Woodpecker.—One.
26. Downy Woodpecker.—One.
27. Northern Flicker.—Common.
28. Chimney Swift.—Common in the city.
29. Kingbird.—Common.

30. Arkansas Kingbird.—Common.
31. Traill's Flycatcher.—Only one.
32. Prairie Horned Lark.—But few seen.
33. Blue Jay.—Very few.
34. Crow.—Common.
35. Bobolink.—Common on the prairie.
36. Cowbird.—Common.
37. Yellow-headed Blackbird.—Very common around the sloughs.
38. Red-winged Blackbird.—Common.
39. Western Meadowlark.—Common.
40. Baltimore Oriole.—One.
41. Bronzed Grackle.—Common.
42. Grasshopper Sparrow.—Very few.
43. Field Sparrow.—Heard.
44. Song Sparrow.—Common.
45. Towhee.—Heard.
46. Rose-breasted Grosbeak.—Common.
47. Dickcissel.—Very common.
48. Lark Bunting.—Only one.
49. Purple Martin.—Common in the city.
50. Barn Swallow.—Common.
52. Rough-winged Swallow.—Fairly common along the river.
53. White-rumped Shrike.—Fairly common.
54. Red-eyed Vireo.—Heard.
55. Warbling Vireo.—Heard.
56. Yellow Warbler.—Common.
57. Maryland Yellow-throat.—Common.
58. Catbird.—Very common.
59. Brown Thrasher.—Common.
60. House Wren.—Common.
61. Chickadee.—Only one.
62. Wood Thrush.—Heard.
63. Wilson Thrush.—Heard.
64. Robin.—Common.
65. Bluebird.—Common.

Of course some of the other common birds like the Red-headed Woodpecker and Goldfinch were nowhere to be seen.

ADRIAN LARSON.

Publications Reviewed

A History of the Game Birds, Wild-Fowl and Shore Birds of Massachusetts and adjacent states including those used for food which have disappeared since the settlement of the country, and those which are now hunted for food or sport, with observations on their former abundance and recent decrease in numbers; also the means for conserving those still in existence. By Edward Howe Forbush, State Ornithologist of Massachusetts. Illustrated with Drawings by W. I. Beechcroft and the Author, and Photographs by Herbert K. Job and Others. Issued by the Massachusetts State Board of Agriculture. By Authority of the Legislature, 1912.

"This volume is intended to fill a place heretofore unfulfilled, in at least two respects, by any American work. The former abundance and later decrease of the migratory game birds of eastern North America have been studied and narrated at length for the first time, and the histories of the food species of New England which have been exterminated since the settlement of the country have been brought together. This has been done with a purpose.

"Whenever legislation for the protection of shore birds or wild-fowl has been attempted in the Maritime States of the Atlantic seaboard, certain interested individuals have come forward to oppose it, with the plea that these birds are not decreasing in numbers, but, instead, are increasing, and that they need no further protection. Some admit that certain species are decreasing, but argue that shooting is not responsible for this condition.

"The object of the investigation on which this volume is based was to secure information from historical and ornithological works, and from ornithologists, sportsmen and gunners, regarding the increase or decrease of the birds which are hunted for food or sport.

"The report is published with the intention, first, to show the former abundance of resident and migratory game birds in America and their subsequent decrease in numbers; second, to furnish gunners and others with the means of identifying game birds, that the people may recognize the different species and thus fit themselves to observe protective laws; and third, to demonstrate how the birds may be conserved.

"In the introduction an attempt is made to narrate briefly the history of the decrease of resident and migratory game birds along the Atlantic seaboard. Part I continues this history, but particularizes and localizes by taking up separately each individual species that has been recorded from Massachusetts and nearby states. Part II groups together the histories of the species utilized as

food which have disappeared from New England since the settlement of the country, and exhibits the causes that brought about the destruction of these species. Part III analyzes the causes of the decrease of the species of game birds, wild-fowl and shore birds that are still extant, and indicates how they may be conserved and how depleted areas may be restocked with certain species."

There are 36 plates, exclusive of the colored frontispiece of the discussion as food, and the gun makers who wish a market for their wares, but he warns them that at the present rate of decrease it will be only a short time until there will be none of these birds to furnish sport or food. The conservation of these birds can be realized by the enforcement of, or better, the observance of laws, state or federal, making closed seasons, especially in spring, closed seasons over a number of years for such species as are now nearly extinct, reservations where the birds may breed unmolested, and the artificial propagation of large numbers. It is a most timely book which has large value the country over, since a great deal of data is given not confined to New England. A great deal of information is here brought together for the first time. L. J.

The Experimental Method of Testing the Efficiency of Warning and Cryptic Coloration in Protecting Animals from their Enemies. By W. L. McAtee. From the Proceedings of The Academy of Natural Sciences of Philadelphia, June, 1912. Issued September 6, 1912.

The thoroughness with which Mr. McAtee goes into the subject before reaching his conclusions may best be shown by transcribing the table of contents of this paper.

Introduction. Experiments with Invertebrates (chiefly Insects). Experiments with Vertebrates: Fishes; Amphibia, in Countries other than the United States, In the United States — Toads, Frogs, Salamanders. Reptiles: Experiments in Asia, Experiments in Upland Plover, 82 cuts and 26 figures in the text. There are 622 pages including a list of contributions and an excellent index.

The species mentioned as having become extinct are Great Auk, Labrador Duck, Eskimo Curlew, and Passenger Pigeon. The extirpated species given are Trumpeter Swan, Whooping Crane, Sandhill Crane, and Wild Turkey. These furnish concrete illustrations of what may be expected with many of our game birds unless something is done to check their steady decrease.

In the third part of the book Mr. Forbush recognizes and discusses at length the legitimate claims of the sportsman, the pothunter, and the public who wish to continue to use the birds under

Europe, Experiments in America. Mammals. Mixed Groups of Animals. Birds: Experiments in Europe, Experiments in Africa, Experiments in Asia, Experiments in America, Experiments by Judd and Beal. Summary. This whole inquiry covers 83 pages.

Mr. McAtee calls attention to the fact that "The selectionist theories regarding the significance and the causes of production of the so-called warning, mimicking, and cryptic coloration long preceded a knowledge of the food preferences of insectivorous animals sufficient to warrant such speculation," and that knowledge of the food preferences "is still almost entirely lacking for many parts of the world — including the Amazon valley, which is the home of the brightly colored Heliconiid butterflies and their mimics that suggested the mimicry theory to H. W. Bates."

After a careful examination of the experiments which have been performed and reported in literature the author is led to say, "from the writer's point of view, three main conclusions regarding the experimental tests of the efficiency of protective adaptations against natural enemies are unavoidable: (1) The experiments are very inconsistent; (2) they have been misinterpreted; and (3) they are not trustworthy guides to behavior under natural conditions. Having no certain value in themselves, they must be checked up with definite knowledge of the natural food habits. This information is obtained by collecting animals with freshly captured prey and by examination of pellets, castings, and the contents of stomachs or other portions of the alimentary canal. There is no possibility of going back of such evidence on the choice of food, nor is there any need of so doing.

"Since this evidence is sufficient in itself, and since experimental data must be supported by it to be worthy of any consideration, why perform the experiments? The same time expended in collecting trustworthy data regarding the natural food habits of animals would bring much greater returns, and the result would be truth, not imaginative inferences from abnormal behavior." L. J.

Food of Some Well-known Birds of Forest, Farm, and Garden. By F. E. L. Beal and W. L. McAtee, Biological Survey, U. S. Department of Agriculture, Farmers' Bulletin No. 506. Issued September 25, 1912.

This Bulletin follows Bulletin No. 54, treating of birds that are of equal importance with those treated in the former Bulletin, but the species are less widely distributed, or decidedly local in distribution. They are: Three-toed Woodpeckers, California Woodpecker, Lewis Woodpecker, Red-bellied Woodpecker, Sapsuckers, Hummingbirds, Arkansas Kingbird, Western Yellow-bellied Fly-

catcher, Horned Lark, Chipping Sparrow, Junco or Snowbird, White-crowned Sparrow, Southern Butcher Bird, Audubon Warbler, Ruby-crowned Kinglet.

We note that ten of the sixteen figures are from the pencil of Robert J. Sim. They are of unusual excellence. Too much cannot be said in commendation of the work which this paper represents. The data gathered in these investigations will surely furnish incontrovertable data for inquiries such as Mr. MaAtee has begun in a paper reviewed elsewhere in this number. L. J.

On the Collection of Zoölogical Specimens for the Victoria Memorial Museum, Zoölogy. By P. A. Taverner. Canada, Department of Mines, Geological Survey. No. 1234, 1912.

In this little pocket pamphlet of 56 pages Mr. Taverner has not only condensed a complete compendium for collectors of all sorts of zoölogical material with which a great museum should be concerned, but he also gives valuable directions for shipping specimens, methods of collecting, ammunition, other equipment, conduct in the field, and all that goes with the preservation of specimens. In short, it is such a pamphlet as one would find of great value who goes out into the woods and fields for any purpose, and should stimulate those not otherwise inclined to gather specimens to do so. Mr. Taverner's plea to the individual for assistance in building up the Victoria Memorial Museum ought to stir every loyal Canadian to such action as will result in the building of a museum worthy of the wealth and intelligence of Canada. L. J.

Food of Our More Important Flycatchers. By F. E. L. Beal, Assistant, Biological Survey, U. S. Department of Agriculture, Biological Survey — Bulletin No. 44. Issued September 19, 1912.

The species here treated are the Kingbird, Arkansas Kingbird, Crested Flycatcher, Phœbe, and Black Phœbe. Each is illustrated by the inimitable colored plates of Louis Agassiz Fuertes. The Bulletin covers sixty-six and a half pages. The food of each of the five species is treated in great detail. It is another of the many invaluable studies of the food of our birds. L. J.

Pocket List of Birds of Eastern Massachusetts. Albert P. Morse, Curator of National History. Peabody Museum, Salem, Mass. Published by the Peabody Academy of Science, Salem, Mass. 1912.

"The purpose of this little work is to provide the bird-student in eastern Massachusetts with a handy pocket reminder of 'what, when, and where' to seek." . . . . "The List contains 390 species and subspecies. Of these three are probably or certainly extinct; sev-

eral more are extirpated; three are believed to be hybrids; five or six are known or believed to have been introduced; of about 375 remaining, 165 are popularly distinguished as water-birds and 210 are land-birds. Of these, 29 water-birds and 37 land-birds are accidental wanderers from various points of the compass, chiefly from the West and South; 30 more are of decided rarity, leaving about 280 species of somewhat regular occurrence, of which about three-sevenths are water-birds, a relatively large proportion due to the coastwise situation."

These 390 species and subspecies are arranged in systematic sequence following the A. O. U. Check-List implicitly, but adding a number of local or vernacular names. No attempt is made to give descriptions. Relative abundance and status, as well as the times of occurrence are given, and the place of occurrence is stated in the case of each species. The right hand page is left blank for annotations, so that the actual number of printed pages covered by the List is 38. An index covers about 8 pages, and the List closes with about six double pages of "Seasonal Charts," indicating by lines and dashes the actual times of the year when each species is present. This chart is also arranged systematically as to the names of the birds. While there would be some obvious advantages in a chronological arrangement of the species, in the order of their spring migrations, the disadvantage of not knowing where to look for any given species would be great. The print and paper are excellent. The List should prove of great value to students of birds in the region which it covers. L. J.

Birds in Relation to a Grasshopper Outbreak in California. By Harold C. Bryant. University of California Publications in Zoölogy, Vol. 11, No. 1, pp. 1-20. November 1, 1912.

"An investigation into the relation of birds to a grasshopper outbreak was carried on at Los Banos, Merced County, California, July 11 to 17, 1912.

"Grasshoppers were found to be causing considerable damage to alfalfa and vegetables. An infestation of about fifteen grasshoppers to the square yard appeared to be necessary to cause noticeable damage. In the infested areas the grasshoppers were computed to number from twenty to thirty to the square yard." Observations and the examination of stomach contents showed the following species of birds to be feeding upon grasshoppers: *Agelaius phœniceus californicus, Sturnella neglecta, Euphagus cyanocephalus, Icterus bullocki, Tyrannus verticalis, Lanius ludovicianus gambeli, Passer domesticus, Speotyo cumicularia hypogœa, Oxyechus vociferus, Butorides virescens anthonyi, Sayoris nigricans, Otocoris*

alpestris actia, Agelaius tricolor, Petrochelidon lunifrons lunifrons.

"The efficiency of the different species, when determined by destructive capacity, showed the burrowing owl to be the ablest destroyer; when determined by the numbers of individual birds in the territory, showed blackbirds, meadowlarks, killdeers, orioles, and shrikes to take positions in the order named.

"Birds cannot be considered a dependable means of control of all grasshopper epidemics, but can be inferred to be efficient in the prevention of many" and "can be depended on to act as defenders and protectors of crops because of their warfare against grasshoppers, and their value in this regard can be estimated in dollars and cents."

"Birds flocked to areas where grasshoppers were abundant" and "changed their feeding habits and fed on grasshoppers, the insect most available in this case."

Mr. Bryant concludes that while birds fail to check an insect outbreak they do constantly act as a regulative agent under ordinary circumstances when no artificial means of control are employed; and that some species which may do some damage to crops at ordinary times will be of great service during an insect epidemic, and thus offset the damage at other times. We welcome papers of this sort, dealing with concrete cases. Such intensive studies should be pressed in every state. L. J.

A Systematic List of the Birds of California. By Joseph Grinnell. Cooper Ornithological Club, Pacific Coast Avifauna Number 8. Contributions from the Museum of Vertebrate Zoölogy of the University of California. Hollywood, California. Published by the Club, August 30, 1912. Edited by Joseph Grinnell and Harry S. Swarth at the Museum of Vertebrate Zoölogy, University of California.

The writer does not feel competent to pass judgment upon the scheme of classification here given for the birds which occur in the state of California. The task of constructing a classification which represents more nearly what practically all ornithologists the world over consider a more nearly natural arrangement than that adopted and adhered to by the A. O. U., and which must necessarily differ from it, is a somewhat thankless one. Such a classification cannot be adopted and consistently used in one part of the country without throwing into confusion hardly less than the confusion which prevailed before the present A. O. U. arrangement was adopted for North America, the work of this continent. If, as we believe, this scheme of classification is put forward as a contribution to the subject of classification and will serve to accelerate the work of the A. O. U. committee upon classification,

so that ere long we may expect a revised Check-List fashioned upon modern lines, we heartily welcome it, and extend our thanks to the authors for it. L. J.

Birds of the Pacific Slope of Southern California. By George Willett. Cooper Ornithological Club. Pacific Coast Avifauna Number 7. Hollywood, California. Published by the Club, July 25, 1912.

The territory which this list covers "comprises all of Santa Barbara and Ventura counties, Los Angeles County south and west from the Liebre Mountains, Sierra Pelona and Sierra San Gabriel, San Bernardino County south and west from Sierra Madre and San Bernardino ranges, all of Orange County, Riverside County west from the San Jacinto range, and San Diego County west from the Volcan and Cuyamaca ranges; also the eight islands of the Santa Barbara group, namely San Miguel, Santa Rosa, Santa Cruz, Anacapa, Santa Barbara, San Nicolas, Santa Catalina, and San Clemente. In some cases I have deemed it advisable to refer to records outside the limits as described above in order to show certain connecting features in distribution or migration."

The order followed is that of the 1910 A. O. U. Check-List, except in a few instances where the distribution of certain species do not seem to coincide with the Check-List. The conservatism of the list as here presented is commendable. At that the main list includes 377 names, with an added hypothetical list of 18. The list is concerned with relative abundance, distribution both altitudinal and latitudinal, place and time of breeding of breeding birds, times of migration, and such citations of literature as seem pertinent. Occasional notes of other character add interest to the list. Paper, typography and workmanship are fully equal to the high standard which the Cooper Club is so noted for. The paper is a welcome addition to faunal literature, as bringing this region down to date. L. J.

The Present and Future Status of the California Valley Quail. By Harold C. Bryant, Fellow in Applied Zoölogy on the Fish and Game Commission Foundation in the University of California. With Map and Diagram. Reprinted from The Condor, Vol. XIV, July, 1912, pp. 131-142.

The author concludes, after a careful examination of facts, that the decrease of these birds in some sections calls for conservative action lest in such sections the species be exterminated. In sections where there has been no change and where there has been an increase he recommends that game laws which will operate to maintain a proper balance be enacted. It is no kindness to wild ani-

mals to permit them to increase to the point where crowding must inevitably result in a decreased efficiency in meeting the demands of life, for in such case there is real danger to the species.

L. J.

A Revision of the Subspecies of the Green Heron (*Butorides virescens* [Linnaeus]). By Harry C. Oberholser, Assistant Ornithologist, Biological Survey, Department of Agriculture. No. 1916. —From the Proceedings of the United States National Museum. Vol. 42, pages 529-577. Published August 29, 1912. Washington.

To the six previously existing forms of this heron there are here added twelve subspecies, all south of the United States. In addition to the study of this species, and as a necessary preliminary to it, Mr. Oberholser found it necessary to determine the exact status of *Butorides brunescens* (Lembeye), which he concludes is a good species, occurring in Cuba with the form which inhabits Cuba, here newly named *Butorides virescens cubanus*. The evident thoroughness of this revision inspires the confidence that the splitting of this species of heron into subspecies is settled for years to come.

L. J.

THE ORNITHOLOGICAL JOURNALS.

The Ontario Natural Science Bulletin, No. 7, 1912. Journal of the Wellington Field Naturalists' Club, Guelph, Ontario.

The bird notes in this excellent annual are: The Bartramian Sandpiper Breeds near Guelph, Herbert Groh; The Yellow-breasted Chat at Alma, Ont., John Allan, Jr.; Notes on the Winter Birds at Guelph, Ontario, in 1911-12, E. W. Calvert; A. Late Migration of the Evening Grosbeak in Ontario, A. B. Klugh; A Chipping Sparrow's Nest on the Ground, J. W. Noble; A Large Colony of Bank Swallows' Nests, J. W. Noble; Spring Bird Notes from Oakville, Ontario, E. W. Calvert.

L. J.

THE AUK. October, 1912. Vol. XXIX, No. 4.

The Freezing of Cayuga Lake in Its Relation to Bird Life. By Alvin R. Cahn, four plates.

—The Niagara Swan Trap. By J. H. Fleming.

Methods of Estimating the Contents of Bird Stomachs. By W. L. McAtee.

The Breeding Birds of Southern Center County, Pennsylvania. By Richard C. Harlow.

Some observations on the Life-History of the Red-breasted Merganser, *Mergus serrator*, Linn. By R. M. Strong. Three plates.

Remarks on the Case of Roosevelt vs. Thayer, with a few Independent Suggestions on the Concealing Coloration Question. By Francis H. Allen.

Birds Observed in Montgomery County, Virginia. By Ellison A. Smythe, Jr. One plate.

BIRD-LORE. September-October, 1912. Vol. XIV, No. 5.

Frontispiece in color—Towhee, Arctic Towhee. By Louis Agassiz Fuertes.

Phœbe vs. Catbird; A Study in Adaptability. By A. A. Allen.

Florida Bob-whites. Illustration. By George Shiras, 3rd.

The Story of Peter. Illustrated by G. A. Bailey. By Fanny Hardy Eckstorm.

Two Problems in Identification. Illustrated.

The Migration of North American Sparrows. By W. W. Cooke.

Notes on the Plumages of North American Sparrows. Illustrated by Louis Agassiz Fuertes. By Frank M. Chapman.

THE CONDOR. September-October, 1912. Vol. XIV, No. 5.

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